

## CLAIMS

What is claimed is:

- JND AL7
1. A method for communication of data between a plurality of remote transceivers and a network based on data flows over multiple types of communication links disposed there between, the method comprising the steps of:
- 5
- establishing a private short-range wireless communication link between the plurality of remote transceivers and a hub, the hub maintaining data flows for each remote transceiver;
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- providing at least one hardwired communication link over which data flows are established between the hub and an access unit; and
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- supporting data flows over a subscription-based wireless communication link between the access unit and a base station, wherein the base station is in communication with the network.
2. A method as described in claim 1 further comprising the step of:
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- making available a plurality of subchannels within the subscription-based wireless communication link for establishing data flows, wherein a data transfer rate on each subchannel is typically less
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- than the nominal data transfer rate of any data flow.

3. A method as described in claim 2 further comprising the step of:

allocating available subchannels on an as-needed basis over the subscription-based wireless communication link to provide data transfers over two or more subchannels for higher speed transfers of at least one data flow between a remote transceiver and the network.

4. A method as described in claim 1 wherein the hub is based on an IEEE 802.11 standard.

5. A method as described in claim 1 wherein the hardwired communication link between the hub and the access unit is based on an IEEE 802.3 standard.

6. A method as described in claim 1 wherein the private wireless communication link supports multiple individual high speed data transfers for each of the remote transceivers.

7. A method as described in claim 1 wherein the subscription-based wireless communication link is also a long-range wireless communication link.

8. A method as described in claim 1 wherein the subscription-based wireless communication link is also a high speed wireless communication link.

9. A method as described in claim 1 wherein the remote transceivers are operably linked to remote computer terminals in communication with the network.
- 5 10. A method as described in claim 1 wherein communication between the hub and the remote transceiver is based on spread spectrum.
- 10 11. A method as described in claim 1 wherein the short-range wireless communication link is FHSS around 2.4 Gigahertz and each remote transceiver communicates with the hub over a unique channel.
- 15 12. A method as described in claim 1 wherein the short-range wireless communication link is DSSS around 2.4 Gigahertz and each remote transceiver communicates with the hub over a unique channel.
13. A method as described in claim 1 wherein the short-range wireless communication link is based on infrared.
- 20 14. A method as described in claim 1 wherein the network is an Internet.
15. A method as described in claim 1 wherein the at least one wired communication link includes at least one Ethernet link.

16. A method as described in claim 1 wherein the second type of wireless communication link is based on a radio frequency near 1.9 Gigahertz.

17. A method as described in claim 1 wherein the second  
5 type of wireless communication link has a cellular range of greater than 1 mile.

18. A method as described in claim 1 wherein communication between the plurality of users and the hub is based on a wireless local area network (WLAN).

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*Cont.*  
10 19. A method for communication of data between a plurality of remote transceivers and a network based on data flows over multiple types of communication links disposed therebetween, the method comprising the steps of:

15        establishing a first set of wireless communication links between the plurality of remote transceivers and a hub for transmission of data messages from terminal equipment coupled to the plurality of remote transceivers;

20        transmitting the data messages from at least one of the plurality of remote transceivers to the hub;  
         receiving the data messages at the hub;  
         routing data messages received by the hub over a hardwired link to a subscriber unit; and

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for higher speed transfers of at least one data flow between a remote transceiver and the network.

26 <sup>26</sup>/<sub>26</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the hub is based on an IEEE 802.11 standard.

5 <sup>27</sup>/<sub>27</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the hardwired communication link between the hub and the access unit is based on an IEEE 802.3 standard.

28 <sup>28</sup>/<sub>24</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the second wireless communication link supports multiple individual high speed data transfers for each of the remote transceivers.

29 <sup>29</sup>/<sub>25</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the first wireless communication link is also a long-range wireless communication link.

30 <sup>30</sup>/<sub>26</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the second wireless communication link is also a high speed wireless communication link.

31 <sup>31</sup>/<sub>27</sub>. A method as described in claim <sup>23</sup>/<sub>19</sub> wherein the remote transceivers are operably linked to remote computer terminals in communication with the network.

- 32 ~~28~~. A method as described in claim <sup>23</sup>~~19~~ wherein  
communication between the hub and the remote  
transceiver is based on spread spectrum.
- 33 ~~29~~. A method as described in claim <sup>23</sup>~~19~~ wherein the first  
5 wireless communication link is FHSS around 2.4  
Gigahertz and each remote transceiver communicates  
with the hub over a unique channel.
- 34 ~~30~~. A method as described in claim <sup>23</sup>~~19~~ wherein the first  
10 wireless communication link is DSSS around 2.4  
Gigahertz and each remote transceiver communicates  
with the hub over a unique channel.
- 35 ~~31~~. A method as described in claim <sup>23</sup>~~19~~ wherein the first  
wireless communication link is based on infrared.
- 36 ~~32~~. A method as described in claim <sup>23</sup>~~19~~ wherein the network  
15 is an Internet.
- 37 ~~33~~. A method as described in claim <sup>23</sup>~~19~~ wherein the at least  
one wired communication link includes at least one  
Ethernet link.
- 38 ~~34~~. A method as described in claim <sup>23</sup>~~19~~ wherein the second  
20 type of wireless communication link is based on a  
radio frequency near 1.9 Gigahertz.

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